

Notice of Allowability

Application No.

09/941,745

Examiner

Matthew W. Genack

Applicant(s)

GREVERIE ET AL.

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2 March 2006.
2. ☒ The allowed claim(s) is/are 1, 3 and 5-7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DUC NGUYEN
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 3, and 5-7 are allowed.

Regarding Claims 1 and 3, Inamori *et. al.*, U.S. Patent No. 6,337,974, discloses a method and apparatus for achieving linear gain control over a wide range using a single control voltage in a cellular mobile telephone terminal (Abstract). The cellular mobile telephone terminal comprises a power amplifier, said power amplifier receiving an input signal whose power level is varied by a gain controller stage, and a gain control voltage associated with the power amplifier is varied by means of a control loop (Column 10 Lines 10-18, Fig. 1). The output power level of the power amplifier is detected by a control section (Column 10 Lines 32-47, Fig. 1).

Inamori *et. al.* does not expressly disclose that the power amplifier is of the heterojunction bipolar transistor variety, nor does Inamori *et. al.* expressly disclose the use of a zero intermediate frequency architecture, though Wyse, U.S. Patent No. 6,230,001 teaches that heterojunction bipolar transistor technology is useful in direct conversion, or homodyne receivers, wherein the RF signal is converted directly to baseband, or zero intermediate frequency (Column 1 Lines 22-36, Column 3 Lines 42-51, Fig. 2).

Also, Inamori *et. al.* discloses the varying of the control voltage, for a given input voltage, to obtain the desired output voltage (Fig. 4), though Inamori *et. al.* does not expressly disclose a step wherein if the output power is greater than a certain limit, the input power is kept constant and the control voltage is varied, and if the output power is

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less than said limit, said input power is reduced so as to cause said control voltage to rise to a predetermined value where the power amplifier has a linear gain. Beaucourt *et. al.*, U.S. Patent No. 5,446,463, teaches the use of limiters in conjunction with amplifiers so as to achieve a power transfer function that is linear in one region (below non-linear saturation), and perfectly horizontal in the other region (Column 1 Lines 24-38, Figs. 1 and 3). In this case, if the output power level is at its upper limit, and then falls below this limit, the input power is reduced, since the amplifier would be operating in the linear region. However, Beaucourt *et. al.* does not disclose the varying of the control voltage of an amplifier when the output power of said amplifier is either above or below a predetermined value. No prior art reference was found that discloses the aforementioned two features in the context of an amplifier that uses a feedback control loop to maintain a desired output power.

Claims 5-7 depend on Claim 3, and therefore recite allowable subject matter.

Response to Arguments

2. Applicant's arguments, filed 2 March 2006, with respect to the rejections of Claims 1, 3, and 5-7 have been fully considered and are persuasive. The rejections of Claims 1, 3, and 5-7 have been withdrawn.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Genack whose telephone number is 571-272-7541. The examiner can normally be reached on FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew Genack
Examiner

TC-2600, Division 2617



8 March 2006


DUC NGUYEN
PRIMARY EXAMINER